








# Getting the most out of your Perkins engine

A good inspection program combines your daily inspections with periodic in-depth analysis. These inspections allow you to locate potential problems before they lead to major repairs. Scheduled engine maintenance and repairs allow you to plan and control your operating costs and downtime.

Your daily visual inspection routine should include a complete visual and operational check of your engine. Perkins engines generally indicate problems with advanced warning signs, such as excess smoke, increased fuel and oil consumption and unusual noises. **It is important that you and your staff recognise and understand these repair indicators.** This handy guide helps you troubleshoot the most common engine problems.

What's the problem?	Possible causes
<div>EXCESSIVE</div> <div>BLACK SMOKE</div> <div>AT FULL LOAD</div> <div></div>	<div>Dirty primary/secondary air cleaner</div> <div>Operating in too high a gear</div> <div>Over-fueling</div> <div>Overloading</div>
<div></div> <div>INCREASED FUEL CONSUMPTION</div>	<div>Malfunctioning fuel nozzles/injectors</div> <div>Malfunctioning turbocharger</div> <div>Dirty air cleaner</div> <div>Improper set point</div> <div>Fuel leak</div>
<div>BLUE SMOKE</div> <div></div>	<div>Worn turbocharger seals</div> <div>Worn rings/liners</div> <div>Worn valve guides</div> <div>Hours on engine</div>
<div></div> <div>WHITE SMOKE</div>	<div>Cracked head and/or liners</div> <div>Leaking head gasket</div>
<div>WHITE SMOKE</div> <div></div>	<div>Incorrect starting procedure</div> <div>Incorrect fuel injector timing</div> <div>Faulty injector</div>
<div></div> <div>INCREASED OIL CONSUMPTION</div>	<div>Worn or broken rings/liners</div> <div>Worn turbocharger seals</div> <div>Worn valve guides</div> <div>Hours on engine</div>
<div>UNUSUAL NOISES</div> <div></div>	<div>Malfunctioning fuel nozzles/injectors</div> <div>Malfunctioning turbocharger</div> <div>Worn piston pin bushings</div> <div>Worn rod/main bearings</div> <div>Too much valve lash</div>

Contact your local Perkins distributor for a technical analysis inspection to determine the right course of action; repair determination, engine tune-up, fluid analysis or maintenance improvements to help you keep your engine running in prime condition. Find your local distributor online at [www.perkins.com/distributor](http://www.perkins.com/distributor)